

REMARKS

This is in response to the Office Action dated July 6, 2007. With this response, claims 1, 4, and 7 are amended; claims 17-29 are cancelled; and all pending claims 1-16 are presented for consideration and favorable action.

In the Office Action, claim 4 was rejected under 35 U.S.C. § 104. That claim has been amended and it is believed that the rejection may be withdrawn.

The primary art rejections against the pending claims are based upon Roushaf et al. (U.S. 2003/0138040). It is believed the amended claims are patentably distinct from this reference.

The present invention is directed to addressing a short coming in prior art decoding techniques in which only a fixed equalization is used prior to sequence detection. The present invention as set forth in the pending claims includes receiving a signal having a plurality of bit patterns at a bank of equalizers, with each of the equalizers tuned to a different bit pattern. This is not suggested by the Roushaf et al. reference either alone or in combination with the other references cited in paragraph 6 of the Office Action.

The feedback equalizers of Roushaf (20 and 30) are simply selected by monitoring the uncertainty and if it exceeds a predetermined threshold, using the second equalizer. The equalization appears to be generally based upon the noise in the transmission channel (see generally the background section of Roushaf). The equalizers are not each tuned to a different bit pattern.

Further, combining the Roushaf reference with any of the four additional references cited in paragraph 6 of the Office Action would not provide the claimed bank of equalizers each tuned to a different bit pattern. Paragraph 56 of U.S. 2006/0139646 describes a gas sensor and is not related to receiving bit patterns with tuned equalizers. Next, the abstract along with paragraphs 5, 45 and 48 of U.S. 2004/0136717 describe tunable optical filters that are tuned to target channels (see, for example, paragraph 45), but not to bit patterns. Next, column 5, lines 6-18 of U.S. 7,107,514 describes a filtering method which is not tuned to a bit pattern and which involves convolving the output of the Viterbi detector. Therefore, this configuration also involves an operation which is performed during detection, not prior to detection as set forth in the pending

claims. Further, column 5, lines 41-45 of U.S. 6,810,168 describes a filter tuned to a target wavelength and responsively dropping a channel.

As the invention as set forth in the amended independent or includes elements which are not shown by the cited references, it is believed that the rejections may be withdrawn. Further, the dependent claims, when read in the context of the claims from which they depend, are not shown by the references. For example, the adaptive tuning algorithm for tuning each equalizer to a bit pattern as set forth in claim 6 is not shown.

In view of the above amendments and remarks, it is believed that the present application is in condition for allowance. Consideration and favorable action are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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